

**ABSTRACT**

This invention relates to the production of polyclonal and monoclonal antibodies to specific sites of rapamycin (Sirolimus). The reactivity of these poly and monoclonal antibodies make them particularly useful for immunoassays for therapeutic drug monitoring (TDM). These immunoassays or TDM kits may include polyclonal or monoclonal antibodies to specific sites of rapamycin. These kits may also include various combinations of polyclonal antibodies, polyclonal and monoclonal antibodies or a panel of monoclonal antibodies. Rapamycin conjugate immunogens are prepared for the immunization of a host animal to produce antibodies directed against specific regions of the rapamycin molecule. By determining the specific binding region of particular antibody, immunoassays which are capable of distinguishing between the parent molecule, active metabolites, inactive metabolites and other structurally similar immunosuppressant compounds are developed. The use of divinyl sulfone (DVS) as the linker arm molecule for forming rapamycin-protein conjugate immunogens is described. DVS-linked rapamycin-protein conjugates were found to elicit antibodies with greater specificity to the rapamycin molecule than succinate linked conjugates.